Filing Date: November 14, 2001

Title: POWER SUPPLY METHOD AND APPARATUS

Assignee: Intel Corporation

Page 3 Dkt: 884.572US1 (INTEL)

IN THE CLAIMS

Please amend the claims as follows:

- 1. (Original) A power supply system, comprising:
 - a first voltage source having a first output at a first voltage;
- a second voltage source having a second output at a second voltage approximately equal to the first voltage; and

a circuit element having a plurality of power connection terminals and a plurality of return connection terminals, wherein a first portion of the plurality of power connection terminals and a first portion of the plurality of return connection terminals are connected to the first output, and wherein a second portion of the plurality of power connection terminals and a second portion of the plurality of return connection terminals are connected to the second output.

- 2. (Original) The power supply system of claim 1, wherein the first and second voltage sources are included in a single voltage regulator.
- 3. (Original) The power supply system of claim 1, wherein the first voltage source is included in a first voltage regulator and the second voltage source is included in a second voltage regulator.
- 4. (Original) The power supply system of claim 3, wherein the first output includes a first phase and the second output includes a second phase, further comprising:
 - a phase synchronizing connection between the first and second voltage regulators.
- 5. (Original) The power supply system of claim 1, wherein the circuit element is a microprocessor.
- 6. (Original) The power supply system of claim 1, wherein the circuit element is a socket.

Serial Number: 09/992,244 Filing Date: November 14, 2001

Title: POWER SUPPLY METHOD AND APPARATUS

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7. (Original) The power supply system of claim 1, further comprising:

a third voltage source having a third output at a third voltage approximately equal to the first voltage, wherein a third portion of the plurality of power connection terminals and a third portion of the plurality of return connection terminals are connected to the third output.

- 8. (Original) The power supply system of claim 7, further comprising:
- a fourth voltage source having a fourth output at a fourth voltage approximately equal to the first voltage, wherein a fourth portion of the plurality of power connection terminals and a fourth portion of the plurality of return connection terminals are connected to the fourth output.
- 9. (Original) The power supply system of claim 8, wherein the first output includes a first phase, the second output includes a second phase, the third output includes a third phase, and the fourth output includes a fourth phase, further comprising:
- a phase synchronizing connection between the first, second, third, and fourth voltage sources.
- 10. (Currently Amended) The power supply system of claim 1, wherein the first portion of the plurality of power connection terminals is equal <u>in number</u> to the first portion of the plurality of return connection terminals, and wherein the second portion of the plurality of power connection terminals is equal <u>in number</u> to the second portion of the plurality of return connection terminals.
- 11. (Original) A circuit board, comprising:
 - a circuit card;
- a first voltage source attached to the circuit card and having a first output at a first voltage;
- a second voltage source attached to the circuit card and having a second output at a second voltage approximately equal to the first voltage; and

Title: POWER SUPPLY METHOD AND APPARATUS

Assignee: Intel Corporation

Dkt: 884.572US1 (INTEL)

a circuit element attached to the circuit card and having a plurality of power connection terminals and a plurality of return connection terminals, wherein a first portion of the plurality of power connection terminals and a first portion of the plurality of return connection terminals are connected to the first output using a first plurality of traces on the circuit card, and wherein a second portion of the plurality of power connection terminals and a second portion of the plurality of return connection terminals are connected to the second output using a second plurality of traces on the circuit card.

- 12. (Original) The circuit board of claim 11, wherein the circuit element is a microprocessor.
- 13. (Original) The circuit board of claim 11, wherein the circuit element is a socket.
- 14. (Original) The circuit board of claim 11, wherein the first and second voltage sources are included in a single voltage regulator.
- 15. (Original) The circuit board of claim 11, wherein the first voltage source is included in a first voltage regulator and the second voltage source is included in a second voltage regulator.
- 16. (Original) The circuit board of claim 15, wherein the first output includes a first phase and the second output includes a second phase, further comprising:
 - a phase synchronizing connection between the first and second voltage regulators.
- 17. (Original) A computer, comprising:
- a microprocessor mounted in a socket having a plurality of power connection terminals and a plurality of return connection terminals;
- a first voltage source having a first output at a first voltage connected to a first portion of the plurality of power connection terminals and a first portion of the plurality of return connection terminals; and

Title: POWER SUPPLY METHOD AND APPARATUS

Assignee: Intel Corporation

a second voltage source having a second output at a second voltage approximately equal to the first voltage, wherein the second output is connected to a second portion of the plurality of power connection terminals and a second portion of the plurality of return connection terminals.

- 18. (Original) The computer of claim 17, wherein the first and second voltage sources are included in a single voltage regulator.
- 19. (Original) The computer of claim 17, wherein the first voltage source is included in a first voltage regulator and the second voltage source is included in a second voltage regulator.
- 20. (Original) The computer of claim 19, wherein the first output includes a first phase and the second output includes a second phase, further comprising:

a phase synchronizing connection between the first and second voltage sources.

21. (Original) A method of providing power to a circuit element, comprising:

selecting a first portion of a plurality of power connection terminals electrically coupled to the circuit element;

selecting a first portion of a plurality of return connection terminals electrically coupled to the circuit element;

connecting a first output supplied at a first voltage of a first voltage source to the first portions of the pluralities of power and return terminals;

selecting a second portion of the plurality of power connection terminals electrically coupled to the circuit element;

selecting a second portion of the plurality of return connection terminals electrically coupled to the circuit element; and

connecting a second output of a voltage source to the second portions of the pluralities of power and return terminals, wherein the second output is supplied at a second voltage approximately equal to the first voltage.

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

Serial Number: 09/992,244 Filing Date: November 14, 2001

Title: POWER SUPPLY METHOD AND APPARATUS

Assignee: Intel Corporation

22. (Original) The method of claim 21, wherein the first and second phase outputs are supplied by a single voltage regulator.

- 23. (Original) The method of claim 21, wherein the first output is supplied by a first voltage regulator and the second output is supplied by a second voltage regulator.
- 24. (Original) The method of claim 23, wherein the first output includes a first phase and the second output includes a second phase, further comprising:

inserting a phase synchronizing connection between the first and second voltage regulators.

- 25. (Original) The method of claim 21, wherein the circuit element is a microprocessor.
- 26. (Original) The method of claim 21, wherein the circuit element is a socket.